

REMARKS

The Examiner is thanked for the due consideration given the application.

Claims 1-10, 15-18 and 21-26 are pending. Claim 1 has been amended to remove formula (II).

Entry of this amendment is respectfully requested because it places the application in condition for allowance.

Rejections Under 35 U.S.C. §103(a)

Claims 1-2, 7-10, 15-18 and 23-24 have been rejected under 35 U.S.C. §103(a) as being unpatentable over JP 2003-163032 (Go) in view of JP 2004-039510 (Awano).

Claims 1, 2, 7-10, 15-18 and 23-24 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0113634 (Oh) in view of Awano.

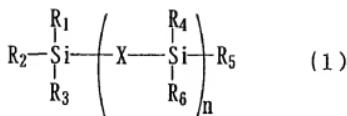
Claims 1, 7-10, 15-18 and 23-24 have been rejected under 35 U.S.C. §103(a) as being unpatentable over CA 2334054 (Gan) in view of Awano.

Claims 6, 22 and 26 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Oh in view of Awano as applied to claim 1 above.

Claims 3-5, 19-20, 21 and 25 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Gan in view of Awano as applied to claim 1 above.

These rejections are respectfully traversed.

The present invention pertains to a claimed nonaqueous electrolyte composition that synergistically uses combination of a mixed organic solvent with a specific system and a specific silicon compound represented by general formula (1).



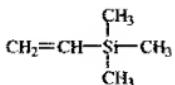
This feature causes the present invention to exhibit unexpectedly superior low temperature characteristics and excellent cycle characteristics.

Admittedly, Go, Oh and Gan indeed teach mixed organic solvents that can be analogized to the system used in the present invention. However, none of Go, Oh and Gan teaches or infers a nonaqueous electrolyte composition containing a silicon compound.

Turning to Awano, this reference indeed teaches a nonaqueous electrolyte composition containing a silicon compound. However, the silicon compound used in Awano is not the one represented by general formula (I) of our invention. Further, Awano is silent about the mixed organic solvent with a specific system of our invention.

An example is compound (15) of Awano, which is reproduced below.

化合物No. 15 (比較化合物)



Furthermore, it should be noted that in Awano, the silicon compound that can be analogized to that of general formula (1) of the present invention is taught as a comparative compound that is unable to sufficiently improve low temperature characteristics and cycle characteristics.

Awano thus teaches away from the present invention.

From such teachings of the cited references, a skilled person in the art would have never been motivated to combine the silicon compound taught as a comparative compound in Awano with the mixed organic solvent with a particular system taught in Go, Oh and Gan (the distinctive feature of our invention). Also, the skilled person would never have been able to reach such advantageous effects as excellent low temperature characteristics and sufficiently improved cycle characteristics (the advantageous effects of our invention) which are attributable to the combination.

Even if one assumes arguendo that the applied art can be combined sufficient to assert *prima facie* obviousness, this purported obviousness would be dissipated by the unexpected results of the present invention. These unexpected results were

set forth in the Declaration of Takayuki Taki, which is of record in the application.

The unexpected results of the present invention were discussed previously and, for brevity, this discussion is not repeated here.

These unexpected results should be viewed in light of Awano teaching away from the present invention.

That is, Awano discloses electrolyte compositions using a silicon compound represented by general formula (1) as "comparative examples" and describes them as "insufficient" for improving cycle characteristics. (See Comparative Examples 1 and 2 in Awano). In contrast, in the compositions of the present invention, silicon compounds represented by general formula (1) accomplish superior cycle characteristics that are comparable to those obtained using silicon compounds represented by general formula (2). (See, e.g., Examples 2-1, 2-2, 2-5, 2-6, 2-9, 2-10, 2-13 and 2-14 in Tables 3 and 4 of the present specification). This distinction further underscores that the superior results obtained using compositions of the present invention would have been unexpected and non-obvious over Awano and the remaining prior art of record.

These rejections are believed to be overcome, and withdrawal thereof is respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, the application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue is respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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